ICTIOLOGIA

SOME NEWLY RECORDED FISHES FROM THE MAGDALENA RIVER SYSTEM.

by CECIL MILES, F. L. S., F. Z. S. (*)

The following species, observed and collected in the course of a survey carried out for the Colombian Government, are recorded for the first time from the Magdalena drainage system. Specimens are in most cases preserved in the Museum of Fishes established in the offices of the *Sección de Caza y Pesca* of the Ministry of National Economy, Bogotá, and the numbers given are those recorded on the bottles kept at that institution.

GALEIDAE.

1. **Carcharinus sp.** (?).—Information obtained from fishermen at Calamar would seem to indicate that a species of shark ascends the Magdalena River at least as far as the junction with the Dique Canal, 112 kilometers from the ocean. This information is recorded here for the sake of reference, and may well be left in doubt until such time as further confirmation is forthcoming.

PRISTIDAE.

2. **Pristis pectinatus** Latham.—Saws corresponding to this species and to *P. perrotteti* Valenciennes were obtained from trustworthy sources at Calamar, at the juncture of the Dique with the Magdalena River. These Selachians are also reported by fishermen as far up the river as Puerto Wilches (some 600 kilometers from the mouth), though no specimens were seen there by me. I had the opportunity

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(*) Con permiso expreso del Ministerio de la Economía Nacional de Colombia.

of examining a number of large specimens at Cartagena. Although there are several differences, including the position of the dorsal fin and the number of teeth on the rostral blade, señor E. D. Lemaitre, of Cartagena, who has studied these fishes, has come to the conclusion that the two forms found together on the Caribbean coast are sexually dimorphous.

BUNOCEPHALIDAE.

4. **Bunocephalus colombianus** Eigenmann.—Hitherto recorded only from the Atrato and the Patía basins. The species was present in some numbers in the catches at Barranquilla.

5. **Xiliphius magdalenae** Eigenmann.—Honda. "Cachegua". This bunocephalid is fairly easy to obtain in Honda, but I have not seen it elsewhere. It is included here in order to give a pictorial comparison of the three known forms of this family inhabiting the Magdalena basin.

6. **Dupouyichthys sapito** Schultz.—This genus and species, first described by Dr. Leonard P. Schultz from Venezuela in 1944, was caught at several localities in the Río Lebrija in Santander. One specimen had embryos adhering to the ventral fins.

BAGREIDAE.

7. **Galeichthys bonillai,** n. sp.—This catfish, although belonging to the marine group having approximated nares, is recorded from Honda, more than nine hundred kilometers distant from the ocean, where, although not common, it is to be found from time to time in the fishermen's nets and in the market place. The following are the characteristics of the type, captured by señor Luis Olaya.

Six barbels, slightly compressed in section, the maxillary one reaching two-thirds the distance to the gill opening. The head somewhat depressed, everywhere covered by thick skin and tissues, the occipital process alone somewhat granulate, elongate, its margins straight and gradually converging, its width at its base about half its length. A large fontanelle, not exernally visible, commencing beween the eyes, interrupted by a bridge about halfway between the

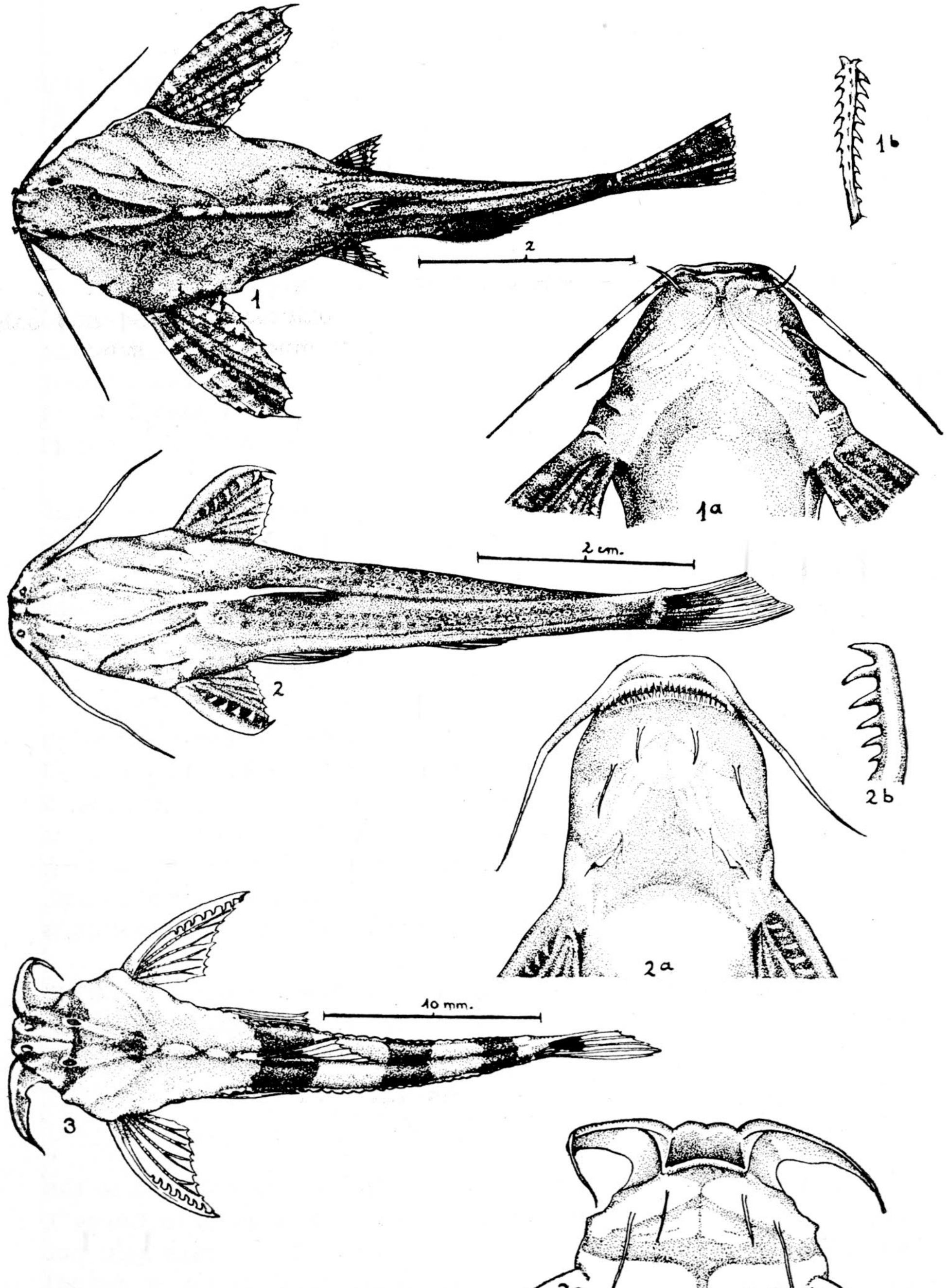
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Fig. 1.—**Bunocephalus colombianus** Eigenmann. Barranquilla.
1a: Mouth, seen from below; 1b: Spine of pectoral fin.
Fig. 2.—**Xiliphius magdalenae** Eigenmann. Honda.
2a: Mouth seen from below; 2b: Spine of pectoral fin.
Fig. 3.—**Dupouyichthys sapito** Schultz. Río Lebrija, Santander.
3a: Mouth seen from below.

eyes and the occipital process and falling short of the latter by half the interorbital width, though continued as a groove for slightly more than the diameter of the eye. A small, band-like dorsal shield.

The teeth pointed, the band on the dentary crescentic, narrow, interrupted at the symphysis; that on the premaxillary twice as wide, equal to diameter of eye and entirely exposed at symphysis. Somewhat weaker teeth in four patches on vomer and palatines, the former small, circular, the latter much larger, sub-triangular. Small, semicircular patches on the upper pharyngeals. Gill rakers 9 plus 4 on the first arch. Gill membranes confluent, forming a free fold across base of isthmus.

Body elongate, its width above pectorals about equal to its depth. Head about 3-½ in the standard length, its depth at occipital process 1-¼ to 1-½ in its greatest width. Snout 3 in head, interorbital a little more than 2. Caudal peduncle narrow, about 3 in its length to base of caudal rays, its depth about 2 in interorbital distance. Eyes very small, superior, with free margin, about 11 in head, 4 in snout, 5.5 in interorbital.

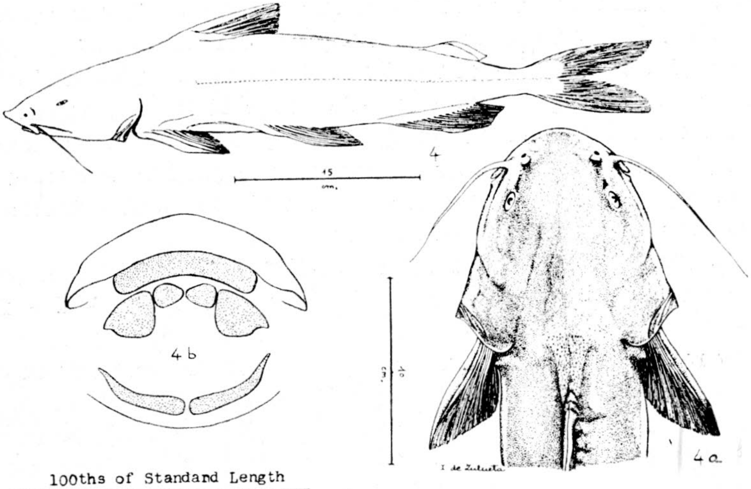
Dorsal I.7. Anal, III.16. Ventrals i.6. Distance of dorsal insertion from snout equal to its distance from first third of adipose, 2-2/3 in standard length. Dorsal and pectoral spines a little more than 2 in head, their anterior margins serrate. Anal more than twice as long as its vertical height, its base and that of adipose half as long again as the dorsal, longest ray of anal 2.5 in the head. Caudal forked.

Colour, light brown above, pale below. All fins pale, pectorals dusky above with light margin.

Standard length of the type, 420 mm. Vernacular name "CAZON" or "BAGRE CAZON". Named in honour of Dr. Heliodoro Bonilla Guzmán, Director of the Department of the Ministry dealing with fishes.

PIMELODIDAE.

12. **Cetopsorhamdia molinae** Miles.—This species, collected in the Upper Cauca by Miles and Olaya in 1942 ("Peces del Alto Cauca") was also found at Puerto Berrío. Dorsal and pectoral rays soft, not pungent, granulated, thickest at their distal third. Bases of mental barbels in a straight line, maxillary barbel reaching middle of pectorals. Length of adipose 3.75 to 4.5 in standard length, 1.2 to 1.4 in distance between origin of adipose and insertion of dorsal. Snout 2.8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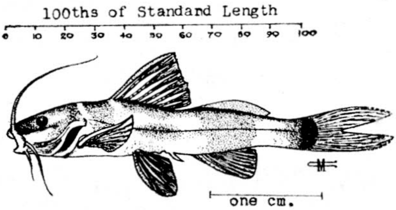
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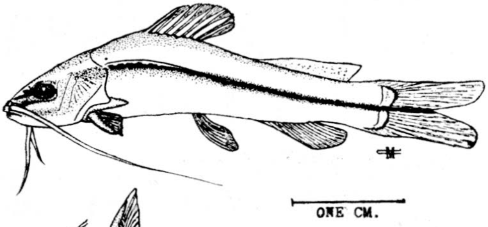

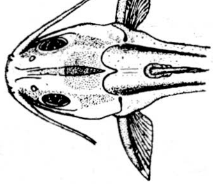

Fig. 4, and 4a.—Galeichthys bonillai Miles.
4b: Arrangement of teeth (in villiform patches) on vomer, palatines and dentaries.
Fig. 5.—**Catopsorhamdia molinae** Miles. Upper Cauca.
Fig. 6, and 6a.—**Rhamdella macrocephala** Miles. Upper Cauca.

in head. Eye small, 7 in head, 2.5 in snout, without free margin. Pelvic insertion below third branched ray of dorsal. Dorsal i,7 (in the type) or i,6. Pectorals, i,9 or i,8. Ventrals i,4 or i,5. Anal iii,7 or iii,8. Colour in alcohol light brown, a pale occipital saddle, a pale vertical band on sides at origin of dorsal, another between dorsal and adipose joined to the former by a horizontal light bar. A darker band at deepest part of body between adipose and anal and a fourth light bar anterior to the dark hypural area.

This species may be synonymous with *C. shermani* Schultz, the Magdalena specimen being very close to this species—the finray counts would appear to vary considerably, the type of *C. molinae* showing rather a wide difference, especially in the number of dorsal rays from both the type of *C. shermani* and the specimen from Puerto Berrío. This species is close to *C. rosae* (Eigenmann), from which it differs in the colouring and in the position of the ventrals. Like Eigenmann's figure, the male type specimen has an anal pore, the Puerto Berrío specimen being a female.

15. **Rhamdella macrocephala** (Miles).—The pungent pectoral spines (Eigenmann's 1922 key notwithstanding) place this species in the genus *Rhamdella*. This small fish, known in the Upper Cauca as "MICUDO" is feared by the fishermen on account of the sharp sting which it inflicts, comparable to that of a wasp.

ASTROBLEPIDAE.

30. **Astroblepus grixalvii** Humboldt.—Specimens were secured from Medellín and also from Charalá in Santander, a first record for the Eastern cordillera.

PYGIDIIDAE.

45. **Branchioica magdalenae** Miles.—Specimens obtained from the Río Lebrija, Santander, at two points.

47. **Eremophilus mutisii** Humboldt.—This fish, one of the larger pygidiids, is very numerous on the Bogotá plateau. It is distinguished from all other members of the family in the absence of ventral fins. Unpigmented specimens as reported by Eigenmann occur with some

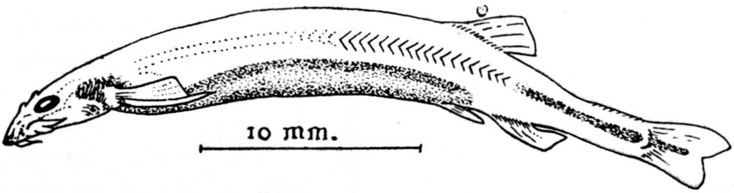

Fig. 7.—**Branchioica magdalenae** Miles. Río Lebrija, Santander.

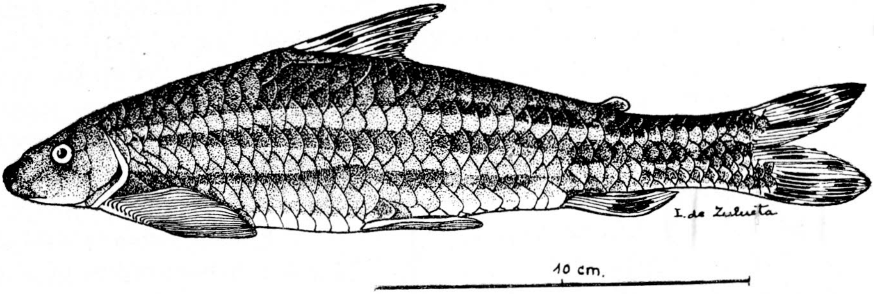

Fig. 8.—**Saccodon Caucae** Schultz & Miles. Charalá, Santander.

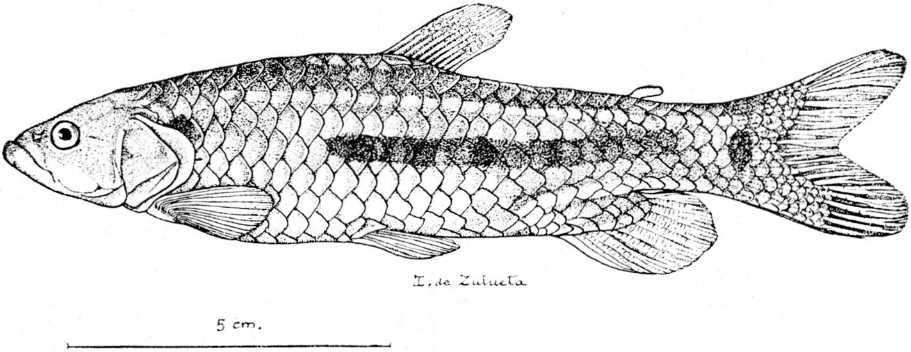

Fig. 9.—**Piabucina pleurotaenia** Regan. Bucaramanga.

frequency and are known as "CAPITAN REY", ranging from completly albinous pale pink specimens through all grades of partial pigmentation to the full vermiculations of the familiar "CAPITAN".

CHARACINIDAE.

75. **Saccodon caucae** Schultz and Miles.—This species, described by us from the Upper Cauca with vernacular name "RAYADO" was encountered at Charalá in Santander, where it is known as "DOR-

MILON" on account of its motionless position on the bottom until disturbed. The occurrence of this fish at comparable altitudes on opposite sides of the Magdalena Valley is noteworthy.

118. **Piabucina pleurotaenia** Regan.—This very beautiful fish, attaining a maximum size of some 200 mm. is common in the mountainous region of Bucaramanga (Santander), where it is known as the "VOLADOR" (Common name in Venezuela, "VOLADORA"—vide Schultz, 1944). In life, the markings on the sides are a bright iridescent blue or green, as is also the spot on the caudal peduncle, and the three middle rows of scales bear a series of orange or red spots, one to each scale. When swimming in the water, a bright golden spot is prominent just before the dorsal fin, but these markings fade in preserved specimens.

The anal fin is enlarged in several of the bigger males and a peculiar ridge is in evidence above it, forming a continuation of the antero-inferior profile of the caudal peduncle. I am indebted to Dr. W. M. Chapman of the California Academy of Sciences for the folllowing observations:

> "The organ that you referred to was found well developed in a male *Piabucina panamensis* 125 mm. long from Raspadura, Colombia. The anal fin was also enlarged. The organ was found fairly well developed in a specimen of *Piabucina erythrinoides* from Mérida, Venezuela, but the anal fin was not so strongly developed. No such organ was found in the following:

P. panamensis, Arriján, Panamá	4 specimens
P. janainensis, Truandó, Colombia	20 specimens
P, panamensis, Truandó, Colombia	38 specimens
P. astrigata, Mindo, Prov. Pichincha, Ecuador	34 specimens

> "These specimens were either all under 100 mm. in standard length or were females. This leads to the query as to whether or not the organ is developed only in fully adult males or perhaps just toward spawning time. In the younger specimens of *P. astrigata* there was found low ridges in this vicinity which were probably the anlage of such organs but which I would not have noticed had I not seen it fully developed in the adult..."

GYMNOTIDAE.

In addition to the five gymnotids reported from this region, a fifth species was found at Honda, which is widely divergent from the known forms, approaching *Sternarchorhamphus* of the Amazon system. As would be expected, the Magdalena form shows several important differences which require it to be placed in a distinct genus, the principal one being the extreme forward position of the minute eye. It has been found only at Honda, its extreme scarcity accounting for its absence from previous collections, although it attains a considerable size (about one metre), the type being somewhat smaller (280 mm.). I have a head 125 mm. long, indicating a standard length of 750 mm., but in spite of its size the specimen from which it was taken weighed little over two pounds, owing to the extremely compressed body. I have pleasure in naming this new genus in honour of señor Jorge Ubidia-Betancourt, a fish culturist employed by the Ministry of National Economy of the Republic of Colombia, in recognition of his efforts resulting in the successful introduction of rainbow trout into the high mountainous regions of Boyacá (Lake Tota) and other parts of Colombia.

UBIDIA new genus.—Compressed gymnotids having the general characteristics of *Sternarchorhamphus,* but differing from this genus in the extreme forward position of the minute eye, which is placed much nearer to the snout than to the gill opening, and in the reduction of the long occipital fontanelle to a mere slit. A caudal fin on a peduncle and an adnate dorsal filament. The snout produced, tube-like, straight and forming an angle with the longitudinal axis of the body. An enlarged mandible. Large patches of pointed teeth in the narrow jaws, those of the dentary extending far back at the sides, those on the premaxillary partly exposed in adult specimens, the jaws little more than coterminous in those of the type specimen. The gape extending posteriorly on snout to the region of the posterior nares. The back with small, embedded scales, not naked, those on the sides minute behind the pectorals, becoming considerably larger over the second half of anal, minute on caudal peduncle and anal muscle. Genotype: *U. magdalenensis.*

132. **Ubidia magdalenensis,** new species.—Body extremely compressed, depth of head at occiput about half its length. Head 6. Snout

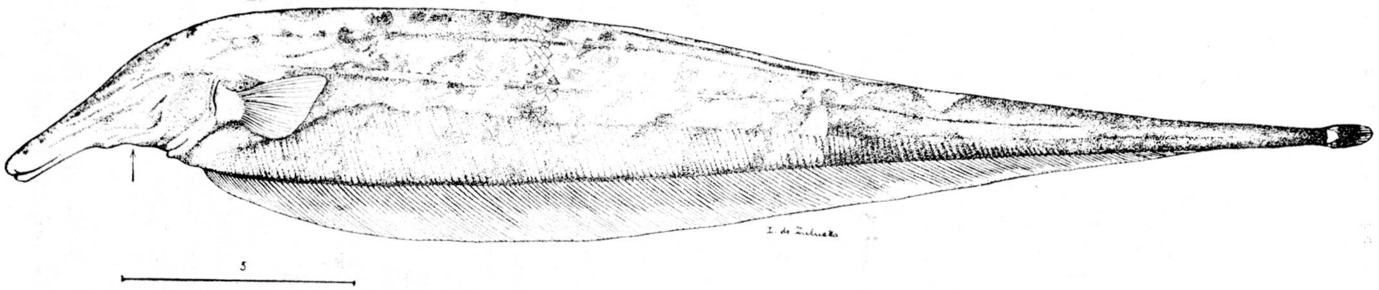
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Fig. 10.—**Ubidia magdalenensis** Miles. Honda. From type, 230 mm.

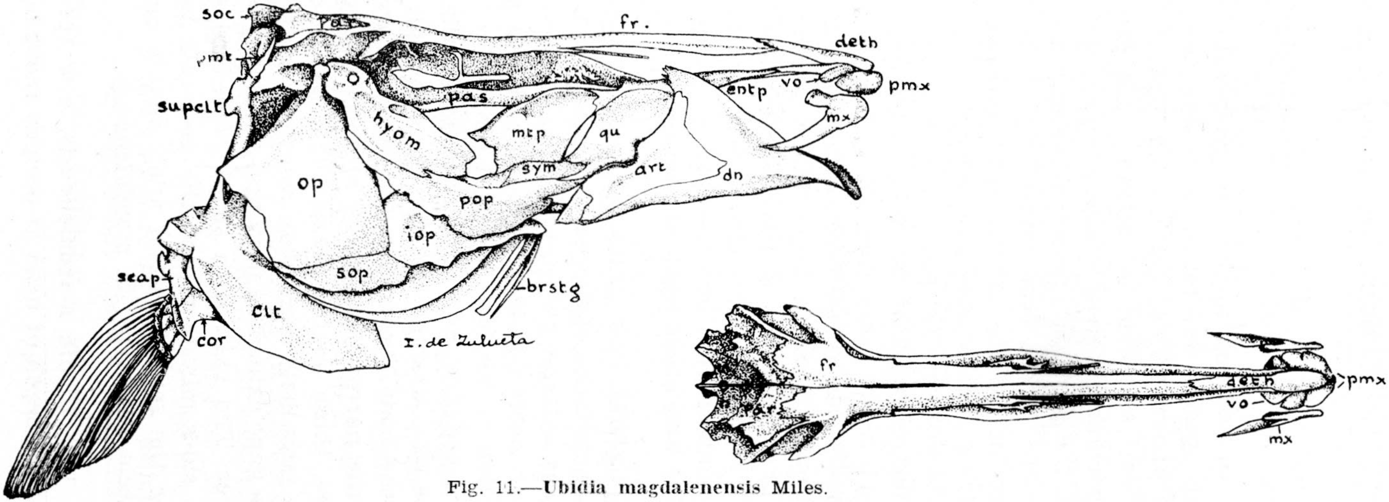
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Fig. 11.—**Ubidia magdalenensis** Miles.
At left: Skull; At right: Neurocranium, seen from above,

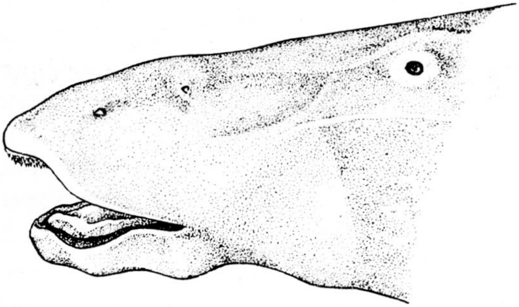

Fig. 12: *Ubidia magdalenensis* Miles.
Detail of mouth, from an adult head.

2.5 in head, anus very considerably behind the eye, its distance from the latter about 1.5 in snout. Occiput smoothly rounded, superior profile of head straight, sloping sharply downwards. Ventral profile between snout and origin of anal rather deeply concave, anal base almost straight except at its commencement. Gape nearly parallel with snout, but the large maxillary inclined at an angle of about thirty degrees to the snout, or horizontally in relation to the body. Gape reaching about halfway to eye or slightly beyond the posterior nares. Anal rays about 175, pectorals ii,15, truncate. Depth of anal 2.5 in greatest depth of body. Dorsal filament rather inconspicuous, adnate, in a trough. Caudal peduncle about half length of head, its least depth 12 in head. Gill opening a small vertical slit in front of first pectoral rays. Teeth strong, pointed, irregularly placed in large patches extending backwards on jaws, especially on the dentary, the premaxillary patch half as deep as wide at the symphysis. Colour in alcohol pale, marbled with patches of numerous cromatophores, the caudal peduncle and body above last third of anal quite dark except for one prominent light patch dorsally and a light narrow dorsal streak. Caudal fin light except for a dark patch towards base of rays. Anal light, contrasting with dark portion of body. Pectorals white. A pair of canals on the chin commencing on either side of the symphysis and running back to the rictus, leaving a prominent labial lobe externally on either side of dentary.

Type, 280 mm. standard length, captured at Honda, Tolima, by Luis Olaya in September 1945. Paratypes of similar size have been sent to the British Museum (Natural History) and to the United States National Museum.

ELOPIDAE.

136. **Tarpon atlanticus** (Cuvier and Valenciennes). *"Sábalo"*.— This large marine game fish ascends the River Magdalena at least to Honda, where it is occasionally caught in dip nets. Large specimens have been known to leap onto the decks of river steamers and thus form a gratuitous contribution to the passengers' menu. It is found in very considerable numbers in the *ciénagas* of the Lower Magdalena, and may spawn there.

The present paper constitutes an interim report on new records pending the preparation and publication of a complete catalogue and key to the species hitherto reported from the whole of the Magdalena River system.